

## DATA PROCESSOR WITH LOCALISED MEMORY RECLAMATION

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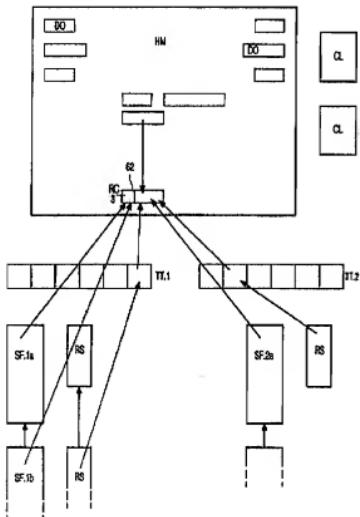
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## Abstract of WO9910811

A data processing apparatus for handling multi-thread programs comprises a data processor coupled with a random-access memory (HM) containing a plurality of data objects (DO). Each data object is accessed via respective pointers carried by memory stacks (SF) associated with respective threads. Periodically, a garbage collection procedure is applied to the random-access memory with those data objects (DO) having no extant pointers thereto from any source being identified and deleted. Subject to a locking constraint applied to some of the data objects, the remainder are compacted to free space in the memory (HM). To enable localising of the garbage collection procedure, reference stacks (RS) are provided for each thread stack frame (SF) such as to identify, preferably via a per-thread reference table (TT), data objects (DO) referenced from only a single frame, which objects are deleted on conclusion of that frame.

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